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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,378	02/27/2004	Huilong Zhu	FIS920030371US1	2377
30743	7590	09/21/2007		
WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C. 11491 SUNSET HILLS ROAD SUITE 340 RESTON, VA 20190			EXAMINER NGO, NGAN V	
			ART UNIT	PAPER NUMBER
			2818	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**GROUP 2800**

Application Number: 10/708,378  
Filing Date: February 27, 2004  
Appellant(s): ZHU ET AL.

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Zhu et al  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 14, 2007 appealing from the Office action mailed September 11, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US-6,091,123                      Krivokapic et al                      July 18, 2000

US-6,657,258 B2                      Bae                      December 2, 2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5, 11, and 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Krivokapic et al.

Krivokapic discloses a field effect transistor comprising a gate structure (42) and a discontinuous film (30) of material within layer of semiconductor material (14) and having a discontinuity aligned with the gate structure.

In re claim 2, Krivokapic also discloses the self-aligned method but no patentable weight is given to the method of making a semiconductor device in claims drawn to structure. A "product by process" claim is directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17(footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessmann, 180 USPQ 324; In re Avery, 186 USPQ 161; In re Wertheim, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); In re Marosi et al, 218 USPQ 289; and particularly In re Thorpe, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear.

In re claims 3 and 4, the insulator film (30) in Krivokapic can inherently be a stressed film.

In re claim 21, Krivokapic clearly show the discontinuous film (30) having an edge located in a position defined by an edge of the gate structure. The discontinuity of

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the film (30) clearly define a depth of a conduction channel within the layer of the semiconductor material to less than the predetermined distance from the surface of the semiconductor material and inherently have stress to the conduction channel.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Krivokapic et al in view of Bae.

Krivokapic discloses all the subject matter discussed above. However, Krivokapic does not disclose about void formed in the semiconductor material. Bae disclose a field effect transistor having void (35) formed in the semiconductor material to suppress floating body effects. Note that void is also formed in porous silicon 23b in Bae. Therefore, it would have been obvious to one of ordinary skill in the art to form void in the semiconductor material in Krivokapic in order to suppress floating body effects as taught by Bae.

Claims 6-9, 12, 13 and 14 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **(10) Response to Argument**

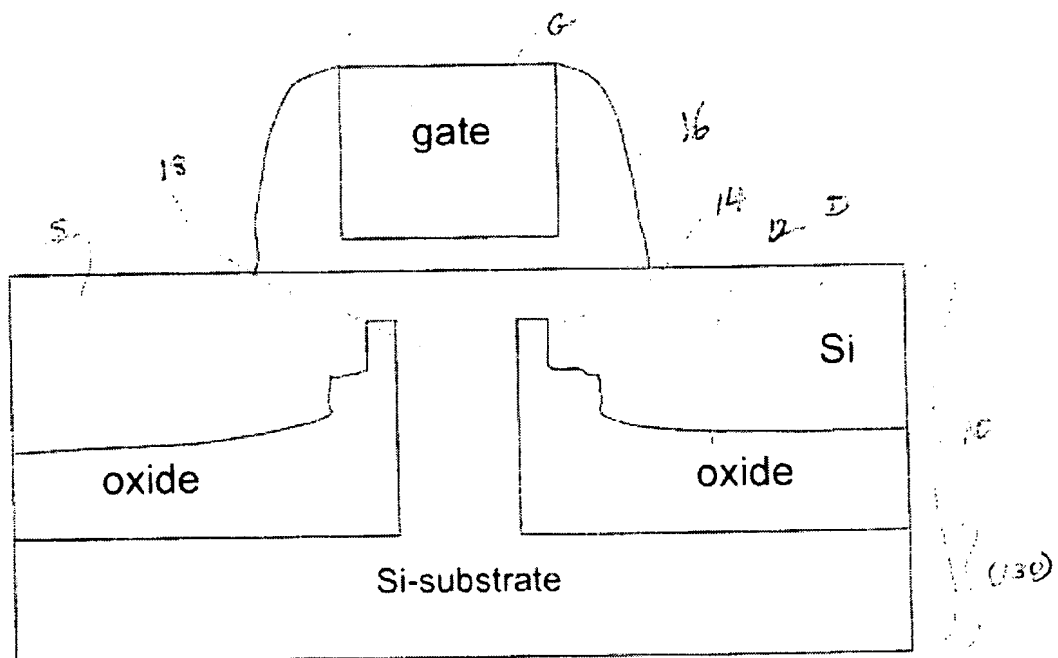
In response to Appellants' arguments that "nothing remotely involving layer 30 or opening 28 in Krivokapic et al is aligned to the gate structure 42", it is clearly shown in

figures 4, 5a, and 6 that the gate 42 is aligned with the opening 28 and the discontinuous film 30 is aligned to the gate structure 42. There is nothing different between Applicants' field effect transistor in figure 1 as shown below and Krivokapic's field effect transistor. Based on the drawings shown below, it is appeared that the discontinuous film in Krivokapic is more aligned to the gate than Appellants' device. Alignment is not limited to edge to edge alignment as argued by Appellants; Alignment as defined by dictionary as an adjustment to a line. Therefore, the gate 42 in Krivokapic is simply aligned with the opening of the discontinuous film 30 which is in turn aligned to the discontinuous film 30. Most of other Appellants' arguments have nothing to do with the claims such as "this structure is for the explicitly recited purpose of controlling the formation of a silicided gate structure....", "the only contemplated function of opening 28 is for body contact...", etc.

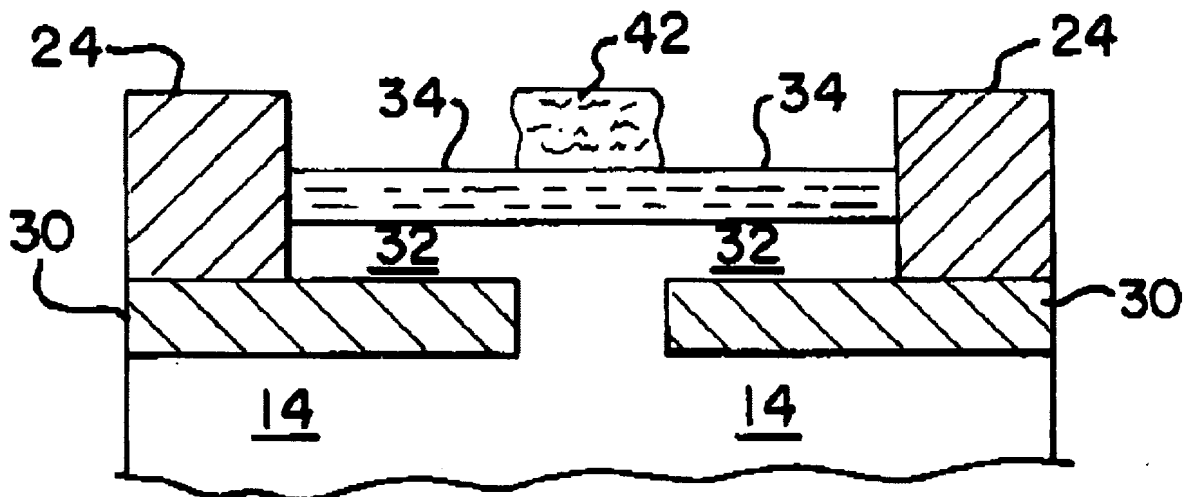
In response to Appellants' arguments on page 13 of the Appeal Brief, it is clear that the discontinuous film 30 in Krivokapic clearly have a discontinuity which includes an edge which is located in a position defined by an edge of the gate structure. The discontinuous film 30 in Krivokapic clearly define a depth of a conduction channel of the field effect transistor within the layer 32 of the semiconductor material to less than predetermined distance from the surface of the semiconductor material. The discontinuous film 30 inherently provides stress to the conduction channel of the field effect transistor. Appellants failed to prove otherwise. Mere recitation of newly discovered property, inherently possessed by things in prior art, does not cause claims drawn to those things to distinguish over prior art. See In re Swinehart, 169 USPQ 226.

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# Structure



Appellant figure 1



Krivokapic figure 5a

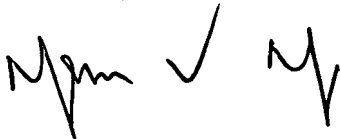
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

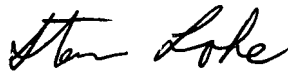
Respectfully submitted,

Ngan Ngo

Handwritten signature of Ngan Ngo, consisting of a stylized 'N' followed by a checkmark and another stylized 'N'.

Conferees:

Steven Loke

Handwritten signature of Steven Loke, written in cursive.

Darren Schuberg

Handwritten signature of Darren Schuberg, written in cursive.